

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY
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EXHIBIT A

HIGHLY CONFIDENTIAL – ATTORNEYS EYES ONLY

EXHIBIT 3
(FILED UNDER SEAL)

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION**

_____)	
MediaTek, Inc.,)	
)	
Plaintiff,)	
)	
v.)	
)	
Freescale Semiconductor, Inc.,)	Case No. 4:11-cv-05341 (YGR)
)	
Defendant.)	
)	
_____)	

EXPERT REBUTTAL REPORT OF BRETT L. REED

includes my prior testimony over at least the last four years (in deposition, arbitration hearings, and trial), identifies other consulting experience, and lists my presentations and publications.

Competition Economics charges \$525 per hour for time I spend consulting and analyzing issues and for any testimony that I may offer relating to my research on this matter. This compensation is not contingent on the opinions that are expressed in this report or on the outcome of this matter in any way.

I have considered information from a variety of sources in the course of my work. These include depositions, financial documents, license agreements, sales and marketing materials, and publicly available documents obtained by Competition Economics. Tab 2 contains a list of such materials, and additional materials may be separately identified in this report and its attachments. In addition to my review of depositions, reports, and documents, I have had conversations with Dr. Frank Vahid, a technical expert retained by Freescale, and with Allen Wagner, head of Freescale's Austin-based design team for i.MX processors.

III. SUMMARY OF OPINIONS

A. Ms. Lawton's Approach and Conclusions

In spite of its considerable length in pages, the Lawton Report has very little actual analysis specific to the case at hand, and ultimately uses a simplistic and incorrect reliance on (a) a potential competitive relationship between the

infringed by only four of the eight accused products, the '845 patent bus arbitration claims are asserted to be infringed by only two of the eight accused products, and the '845 patent bus architecture claims by only one accused product.

Even with respect to the accused products, I understand the ADI patents do not provide significant benefits. With regard to the '331 patent, Ms. Lawton states:

DVS [Dynamic Voltage and Frequency Scaling]³¹ provides additional power-savings because it adjusts to variability in processor workload, which occurs rapidly (in fractions of a second) in applications such as media 'streaming' sessions. I further understand that the benefits are difficult to quantify because the benefits depend upon the baseline application mix/the workload of the device, and the number of applications in use when measurements are taken.³²

However, I understand that the power savings claimed to be associated with the '331 patent are not notable or strategic for the [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³¹ Dynamic Voltage and Frequency Scaling is also referred to as DVFS.

³² Lawton Report, ¶ 87.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

I also understand that Freescale enables a software-based implementation of DVFS, [REDACTED] [REDACTED] a software-based DVFS solution that uses open source Linux code.³³ MediaTek, on the other hand, is accusing a combination of DVFS hardware and software running on the ARM processor, but I understand that this combined hardware-software implementation is not enabled or supported by Freescale. In fact, Freescale encourages users of its products not to use the internal DVFS hardware-software implementation, and instead to use the software-based solution.³⁴

Based on my conversation with Freescale's technical expert, Dr. Frank Vahid, I understand that Freescale could avoid infringement by simply not providing the DVFS software that must be used with the DVFS hardware that MediaTek has accused under the '331 patent. Dr. Vahid also explained that the DVFS load tracking hardware is disabled by default, and must be enabled by users. Dr. Vahid further explained, however, that Freescale has the option of disabling the load tracking hardware portion of the accused implementation

³³ See Wagner Deposition, pp. 167-168 and Weinecke Deposition, pp. 168, 268-269.

³⁴ See <https://community.freescale.com/thread/310081> ("[W]e do not recommend to use internal DVFS, we use software module called CPUFreq in Linux, it is better than hardware DVFS.").

permanently by changing the HDL (hardware description language) code, and that doing so would require about a day of engineering time, would cost less than \$100,000, and could have been done around the time of the hypothetical negotiation.

I understand that Freescale's i.MX51 and i.MX53 are accused under bus arbitration claims of the '845 patent, while the i.MX6 is accused under the bus architecture claims of the '845 patent.³⁵ I further understand that the accused arbitration scheme requires that, when two data processing subsystems of the same priority level request access to memory, one subsystem is guaranteed to have access to a greater portion of the available bandwidth than the other subsystem.³⁶ However, I understand from Dr. Vahid that the default arbitration schemes used in Freescale's chips are to provide either 100% of the bandwidth to one of the subsystems that requests access to memory and 0% to the other or 50% of the bandwidth to each subsystem having the same priority level, and that neither of these arbitration schemes would infringe the arbitration claims of the '845 patent.

In addition, Dr. Vahid explained that Freescale's reference manuals provide a warning to designers not to change the default priority settings, such that two masters that are requesting access to memory will not have the same priority, and thus will not infringe the arbitration claims of the '845 patent. Thus, faced with significant royalty demands, Freescale could disallow the option of changing the default priorities from the i.MX51 and i.MX53 products, and

³⁵ Opening Expert Report of Dr. Krste Asanovic Regarding Infringement of U.S. Patent No. 6,738,845, ¶ 3.

³⁶ '845 patent at 12:65-13:27.

hardwire the default arbitration mechanism. I understand that this would require only about a day of engineering time and would cost less than \$100,000.

Moreover, given that Freescale strongly encourages users to use the default priority settings, removing the option to alter the default settings is likely to have little impact on customers and little impact on performance.³⁷

I understand that MediaTek's contentions that the i.MX6 product family infringes the bus architecture claims of the '845 patent relates to the smart DMA (SDMA) controller's role in managing the transfer of data between the on-chip RAM (OCRAM) and the Multi-Mode DDR Controller (MMDC). Dr. Vahid explained that if this functionality infringes, Freescale has a straightforward design-around that can be implemented by changing a script in the software to disable the accused functionality. I understand that the accused functionality may never actually be used by users, and therefore there is no evidence to suggest that disabling the functionality would have any impact on performance.

2. Ms. Lawton's [REDACTED] Contradicts Economic and Licensing Logic

Ms. Lawton attempts to justify a [REDACTED] for the '331 and '845 patents by pointing to MediaTek's alleged need to defend itself against Freescale "targeting MediaTek's chips in the U.S. International Trade Commission ('ITC') in

³⁷ I understand that MediaTek may argue that the 100%/0% default setting infringes the '845 arbitration claims. In this case, I understand that Freescale could simply change that default setting to equal access (50%/50%) or change the priority of one of the master modules requesting access to a higher priority, which will ensure that it has sufficient bandwidth to complete its required tasks. I understand from Mr. Wagner that changing the default setting to equal access would not impact the performance of applications using static displays, [REDACTED] and that Freescale need only resort to changing the priority of the master module for applications that require more bandwidth, such as display-intensive applications (e.g. video gaming applications).

accused Freescale products into downstream products, result in infringement. I understand, however, that a portion of the sales revenues currently included by Ms. Lawton in her revenue base may be associated with specific uses or applications that do not infringe.

For example, I understand from Dr. Vahid that MediaTek is accusing an arbitration scheme used in the i.MX51 and i.MX53 product families of infringing the arbitration claims of the '845 patent, and that at least the 50%/50% default setting would not infringe those claims, as discussed above. Ms. Lawton does not identify any evidence quantifying the extent of use of arbitration schemes other than the 50%/50% scheme, and thus may overstate the amount of damages for alleged infringement by the i.MX51 and i.MX53 product families. Indeed, Ms. Lawton does not identify evidence quantifying the number of i.MX51 chips [REDACTED] that use an arbitration scheme other than the 50%/50% scheme.

In addition, I understand that claim 35 of the '331 patent requires use of a variable-voltage power supply and that use of such a power supply is not inherent to the accused i.MX products. Ms. Lawton has not pointed to evidence quantifying the extent to which the accused i.MX products are used in conjunction with a variable-voltage power supply and thus, again, may overstate the amount of damages for alleged infringement for the products accused of infringing claim 35.

generated additional profit that can be considered to support a larger royalty rate.

Moreover, it has been shown that [REDACTED]

[REDACTED], with

no evidence that [REDACTED] were assisted by the alleged use of the patented technology asserted in this case.

3. Convoyed Sales (*Georgia-Pacific* Factor 6)

I understand the limited convoyed sales discussed by Ms. Lawton, [REDACTED]

[REDACTED] Thus, this factor is not significant and would not impact the royalty rate determination.

VIII. REASONABLE ROYALTY DETERMINATION

In my opinion, and in consideration of the above facts and my assessment of the *Georgia-Pacific* factors, a reasonable royalty rate is at most [REDACTED] applied to products accused under each patent-in-suit.

The main facts supporting my opinion are:

- The existence of non-infringing alternatives and design modifications for the three patents-in-suit, and the lack of the impact of such modifications on customers.¹²⁷
- The fact that Freescale had 14 months to implement these alternatives between the late August/early September 2010 hypothetical

¹²⁷ Note when Ms. Lawton addresses non-infringing alternatives at *Georgia-Pacific* factor 9 (Lawton Report, p. 168), there is no specific discussion of alternatives and reference only to “comparative utility and advantages of the claimed invention of the Patents-in-Suit are significant but difficult to quantify.”

negotiation for the ADI patents and the start of the damages period,
and approximately 6 years for the Vitesse '753 patent.

- [REDACTED]

[REDACTED]

The evidence in this case supports a [REDACTED] for all three patents in suit. However, given the [REDACTED] in this case, and given the fact that MediaTek is only asserting direct infringement for the '331 patent (and therefore a royalty for the '331 patent does not apply to estimated U.S. revenues on Freescale chips used [REDACTED]), and the fact that a royalty for the '753 patent is not applicable for revenues from products shipped to the U.S. (since MediaTek must prove use for the '753 patent's method claims), it is reasonable and conservative (favorable to MediaTek) to apply a [REDACTED] for each of the patents-in-suit.¹²⁸

The royalty base covering the period November 2011 through Q2 2013 is set out in Tab 4A. Applying [REDACTED]
[REDACTED] See Tab 3.

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IX. PREJUDGMENT INTEREST

The above calculations do not include computations of prejudgment interest. I understand the prejudgment interest rate methodology is under the discretion of the Court. If it would prove useful to the Court, I would be prepared to submit a calculation at a later date after the parameters for the calculation are determined in trial.

Dated: September 27, 2013

A handwritten signature in black ink, appearing to read "Brett L. Reed", written over a horizontal line.

Brett L. Reed



